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COST IN U.S. DOLLARS

SINCE FILE TOTAL
ENTRY SESSION

FULL ESTIMATED COST

=> file req

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 2.60 174:91

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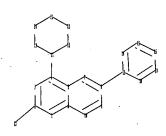
TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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http://www.cas.org/support/stngen/stndoc/properties.html

=> Uploading C:\Program Files\Stnexp\Queries\10595126IIa.str



```
chain nodes :
12
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 13 14 15 16 17 18 19 20 21 22 23
chain bonds :
2-12 4-11 8-13
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10 11-19 11-23 13-14 13-18
14-15 15-16 16-17 17-18 19-20 20-21 21-22 22-23
exact/norm bonds :
2-12 4-11 8-13 11-19 11-23 19-20 20-21 21-22 22-23
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10 13-14 13-18 14-15 15-16
16-17 17-18
isolated ring systems :
containing 1 : 11 : 13 :
```

G1:CH2,O,S

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:CLASS 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:Atom 22:Atom 23:Atom

L5 STRUCTURE UPLOADED

=> d 15 L5 HAS NO ANSWERS L5 STR

Young, Shawquia, Page 2

Structure attributes must be viewed using STN Express query preparation.

=> s 15

SAMPLE SEARCH INITIATED 09:21:02 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED -11 TO ITERATE

100.0% PROCESSED

11 ITERATIONS

3 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

COMPLETE

BATCH

22 TO 418

PROJECTED ITERATIONS: PROJECTED ANSWERS:

3 TO 163

L6

3 SEA SSS SAM L5

=> s 15 full

FULL SEARCH INITIATED 09:21:06 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 235 TO ITERATE

100.0% PROCESSED

235 ITERATIONS

58 ANSWERS

SEARCH TIME: 00.00.01

58 SEA SSS FUL L5

=> file hcaplus

COST IN U.S. DOLLARS

SINCE FILE TOTAL

> ENTRY SESSION

347.01 FULL ESTIMATED COST 172.10

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Young, Shawquia, Page 3

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FILE COVERS 1907 - 25 Sep 2007 VOL 147 ISS 14 FILE LAST UPDATED: 24 Sep 2007 (20070924/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 17

L8 14 L7

=> d ed abs ibib hitstr tot

ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN Entered STN: 29 Jun 2005

II

The title compds. I [wherein R = H, (un)substituted alkyl, alkoxy, etc., Rl = H, Ph, alkyl, etc., R2 and R3 = independently alkyl, PhCH2, etc.] or pharmaceutically acceptable salts thereof are prepared as No synthetase inhibitors for the prevention and treatment of diseases caused by NO

DATE

20031210 20031210

Infinitors for the prevention and treatment of diseases caused by no rise. For example, the compound II was prepared II inhibited NO generation with IDSO of 14.85 µM.

ACCESSION NUMBER: 2005;561514 HCAPLUS

DOCUMENT NUMBER: 143:211928

Preparation of Pteridine derivatives as nitric oxide synthase inhibitors

INVENTOR(S): Yao, Oizheng

PATENT ASSIGNEE(S): SOURCE: China Pharmaceutical University, Peop. Rep. China Faming Zhuanli Shenqing Gongkai Shuomingshu, No pp. given CDDEN: CNXXEV

DOCUMENT TYPE: Patent Chinese Chinese

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION;

PATENT NO. KIND DATE APPLICATION NO. A CN 1546491 PRIORITY APPLN. INPO.: 20041117

OTHER SOURCE(S):

R SOURCE(S):
CASREACT 143:211928, MARPAT 143:211928
247913-60-6P 247913-61-7P 862503-58-0P
RL: PAC (Pharmacological activity); SPM (Synthetic preparation), THU
(Therapeutic use), BIOL (Biological study), PREP (Preparation), USES

(drug candidate; preparation of pteridine derivs. as nitric oxide synthase

inhibitors) 247913-60-6 HCAPLUS 2-Pteridinmine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN Entered STN: 25 Mar 2005

Pteridine derivs. of formula I [X = 0, SOm; m = 0-2; R1 = alkyl, cycloalkyl, aryl, arylalkyl, heterocyclyl, etc., R2 = amino, acylamino.carbamoyl, ureido, etc., R3, R4 = H, halo, alkyl, carboxyalkyl,

arylamino, etc., R3R4 = alkylene, etc.) are prepared for the manufacture of a medicament for

medicament for
the prevention or treatment of septic shock and TNF- α related
disorders. Thus, II was prepared, and had IC50 of 0.4 μ M against
TNF- α .

ACCESSION NUMBER:
2005:259882 HCAPLUS
DOCUMENT NUMBER:
142:336393
TITLE:
Preparation of pteridine derivatives for the

treatment INVENTOR (S):

of septic shock and TNP- α -related diseases. Waer, Mark Jozef Albert, Herdewijn, Piet Andre

Maria; De Jonghe, Steven Cesar Alfons; Marchand, Arnaud Didier Marie; Yuan, Lin; El Hassane, Setrioui 4 Aza Bioscience Nv, Belg. PCT Int. Appl., 79 pp. CODEN: PIXXD2 Patent

PATENT ASSIGNEE(S):

DOCUMENT TYPE:

English

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PA	TENT	NO.			KIN	ο.	DATE				ICAT				D	ATE	
						-									-		
WO	2005	0255	74		A2		2005	0324	1	WO 2	004-	EP10	198		2	0040	913
WO	2005	0255	74		A3		2005	0630									
	W:	AB,	AG.	AL.	AM.	AT.	AU.	AZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
							DE,										
							ID,										
		LK.	LR.	LS,	LT.	LU,	LV.	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NI,
		NO.	NZ.	OM.	PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	sĸ,	SL,	SY,
		TJ.	TM.	TN,	TR.	TT.	TZ,	UA,	UG,	US,	υz,	VC,	VN,	YU,	ZA,	ZM,	ZW
	RW:	BW,	GH.	GM.	KE,	LS.	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	Z₩,	AM,
							RU,										
							GR,										
		SI,	SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	ΝE,
		SN,	TD,	TG													
C D	2405	701					2005	0316		GB 2	003 -	2138	4		2	0030	912

Young, Shawquia, Page 5

ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

247913-61-7 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX

862503-58-0 HCAPLUS 2-Pteridinamine, 6-(4-methylphenyl)-4-(1-piperidinyl)- (CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN GB 2413324 A 20051026 GB 2004-8955 Al 2004271721 Al 20050324 AU 2004-271721 CA 2534549 Al 20050324 CA 2004-2534549 BP 1663244 A2 20060607 EP 2004-765120 (Continued)
20040422
20040913
20040913
20040913 20060607 EP 1663244 R: AT, BB, CH, DB, DK, BS, PR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
US 2007004721 A1 20070104 US 2006-595161 20060310
RITY APPLN. INFO:: GB 2003-21384 A 20030912 PRIORITY APPLN. INFO.: GB 2004-8955 A 20040422 20040913

OTHER SOURCE(S): CASREACT 142:336393, MARPAT 142:336393

IT 247913-58-2P 247913-59-3P 247913-60-6P
247913-61-7P 278800-06-9P 278800-18-3P
847756-41-6P 847756-42-7P 847756-43-8P
847756-44-9P 847756-42-7P 847756-53-0P
847756-47-9P 847756-48-3P 847756-53-0P
847756-51-8P 847756-48-3P 847756-55-0P
847756-51-8P 847756-55-2P 847756-55-0P
847756-51-8P 847756-55-2P 847756-55-0P
847756-60-9P 847756-61-0P 847756-62-1P
847756-63-2P 847756-61-0P 847756-65-4P
847756-63-2P 847756-71-2P 847756-72-3P
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847756-75-0P
847756-75-0P
847756-75-0P
847756-75-0P
847756-75-0P
847756-75-0P
847756-75-0P
847756-76-0P
847756-77-0P
847756-76-0P
847756-76-WO 2004-EP10198

(Uses)
(preparation of pteridine derivs. for treatment of septic shock and TMF-a-related diseases)
247913-58-2 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-phenyl- (9CI) (CA INDEX NAME)

247913-59-3 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

L8 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued

RN 247913-60-6 HCAPLUS CN 2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9C1) (CA INDEX NAME)

RN 247913-61-7 HCAPLUS CN 2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

RN 278800-06-9 HCAPLUS
CN 2-Pteridinamine, 6-(4-chlorophenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

L8 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 278800-18-3 HCAPLUS CN 2-Pteridinamine, 4-(4-morpholinyl)-6-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX NAME)

RN 847756-41-6 HCAPLUS
CN Benzamide, N-[4-[2-amino-4-(4-morpholiny1)-6-pteridiny1]pheny1]- (CA INDEX NAME)

RN 847756-42-7 HCAPLUS
CN Acetamide,
N-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-2-phenoxy(CA INDEX NAME)

L8 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Cont

RN 278800-07-0 HCAPLUS CN 2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

RN 278800-08-1 HCAPLUS CN 2-Pteridinamine, 6-(4-chlorophenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

RN 278800-09-2 HCAPLUS CN 2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

L8 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 847756-43-8 HCAPLUS CN Propanamide, N-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]- (CA INDEX NAME)

RN 847756-44-9 HCAPLUS
CN 2-Furancarboxamide, N-{4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl](CA INDEX NAME)

RN 847756-45-0 HCAPLUS CN Cyclohexamecarboxamide, N-[4-[2-amino-4-(4-morpholiny1)-6pteridiny1]phenyll- (CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

847756-46-1 HCAPLUS Benzamide, N-(4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-4-chloro-(CA INDEX NAME)

847756-47-2 HCAPLUS Acrasanide, N. [4- [2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-2-(phenylmethoxy)- (CA INDEX NAME)

847756-48-3 HCAPLUS
4-Pyridinecarboxamide, N-[4-[2-amino-4-(4-morpholiny])-6-pteridinyl]phenyl]- (CA INDEX NAME)

847756-50-7 HCAPLUS
Methanesulfonamide, N-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl](CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

847756-54-1 HCAPLUS Benzenesulfonanide, N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-(CA INDEX NAME)

RN 847756-55-2 HCAPLUS CN Acetamide,
N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-2-phenoxy(CA INDEX NAME)

847756-56-3 HCAPLUS
4-Pyridinecarboxamide, N-[3-[2-amino-4-(4-morpholiny1)-6-pteridiny1)phenyl]- (CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

RN 847756-51-8 HCAPLUS
CN Butanoic acid,
4-[(4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]4-oxo-, ethyl ester (CA INDEX NAME)

847756-52-9 HCAPLUS Benzoic acid, 4-1([4-{2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]bmmino|carbonyl]-, methyl ester (CA INDEX NAME)

847756-53-0 HCAPLUS Benzamide, N. [3-{2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]- (CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

847756-57-4 HCAPLUS Cyclohexanecarboxamide, N-{3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]- (CA INDEX NAME)

847756-58-5 HCAPLUS
Benzoic acid, 4-{[[3-{2-amino-4-(4-morpholiny1)-6-pteridiny1]pheny1]amino|carbony1|-, methy1 ester (CA INDEX NAME)

RN 847756-59-6 HCAPLUS

Butanoic acid,
4-[[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]4-oxo-, ethyl ester (CA INDEX NAME)

L8 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

NH-C-CH₂-CH₂-C-OBL

RN 847756-60-9 HCAPLUS CN Propanoic acid, 3-[3-[2-amino-4-(4-morpholinyl)-6pteridinyl]phenyl|amino|-3-oxo-, ethyl ester (CA INDEX NAME)

NH-C-CH₂-C-OEt

RN 847756-61-0 HCAPLUS
CN Acetamide, N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-2(phenylmethoxy)- (CA INDEX NAME)

NH-C-CH₂-O-CH₂-Ph

RN 847756-62-1 HCAPLUS CN Ethanesulfonamide, N-[3-[2-amino-4-(4-morpholiny1)-6-pteridiny1]pheny1]-(CA INDEX NAME)

L8 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 847756-65-4 HCAPLUS Carbamic acid, {(18)-2-[[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]-1-(1H-indol-3-ylmethyl)-2-oxoethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 847756-66-5 HCAPLUS
CN Carbamic acid, [(1R)-2-[(3-[2-amino-4-(4-morpholinyl)-6-pteridinyl)phenyl]amino]-1-(1H-indol-3-ylmethyl)-2-oxoethyl]-,
1,1-dimethylethyl ester (9CI)- (CA INDEX NAME)

Absolute stereochemistry.

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LB ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

NH-S-Et

IN 847756-63-2 HCAPLUS
IN Carbamic acid, {(18)-2-{[3-{2-amino-4-(4-morpholiny1)-6pteridinyl]phenyl]amino]-2-oxo-1-{phenylmethyl]ethyl]-, 1,1-dimethylethyl
ester (9CI), (CA INDEX NAME)

Absolute stereochemistry.

H₂N N N N N Ph OBU-t

RN 847756-64-3 HCAPLUS
Cn Carbamic acid, {(1R)-2-{[3-{2-amino-4-{4-morpholinyl}-6-' pteridinyl]phenyl]amino]-2-oxo-1-(phenylmethyl)ethyl}-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

LB ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continu

RN 847756-68-7 HCAPLUS
CN 2-Pteridinamine, 6-(4-ethoxyphenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

N-N-N-OBL

RN 847756-69-8 HCAPLUS
CN 2-Pteridinamine, 4-(4-morpholinyl)-6-[4-(phenylmethoxy)phenyl]- (CA INDEX
NAME)

0 O-CH₂-Ph

RN 847756-70-1 HCAPLUS
CN 2-Pteridinamine, 4-(4-morpholinyl)-6-[4-(2-phenylethoxy)phenyl]- (CA INDEX NAME)

O-CH₂-CH₂-Ph

RN 847756-71-2 HCAPLUS
CN Butanenitrile, 4-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenoxy](CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

847756-72-3 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-(4-propoxyphenyl)- (CA INDEX NAME)

847756-73-4 HCAPLUS
Butanoic acid, 4-[4-{2-amino-4-{4-morpholinyl}-6-pteridinyl}phenoxy}-,
ethyl ester (CA INDEX NAME)

B47756-74-5 HCAPLUS Acetic acid, (4-12-amino-4-(4-morpholinyl)-6-pteridinyl)phenoxy]-, ethylester (9C1) (CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

848415-15-6 HCAPLUS 848415-15-6 HCAPLUS
Naphthalenecarboxamide, N-[4-[2-amino-4-(4-morpholinyl)-5pteridinyl]phenyl]- (9CI) (CA INDEX NAME)

847756-37-0P 847756-38-1P 847756-39-2P
847756-40-5P 847756-67-6P 87756-67-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of pteridine derivs. for treatment of septic shock and TNP-a-related diseases)
847756-37-0 RCAPLUS
Acetamide, N-[4-[2-amino-4-[4-morpholinyl]-6-pteridinyl]phenyl]- (CA INDEX NAME)

RN 847756-38-1 HCAPLUS
CN Acetamide, N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl)phenyl)- (CA

Young; Shawquia, Page 9

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

847756-75-6 HCAPLUS
2-Pteridinamine, 6-[4-(2-methoxyethoxy)phenyl]-4-(4-morpholinyl)- (CAINDEX NAME) (CAINDEX NAME)

847756-76-7 HCAPLUS 2-Pteridinamine, 6-(4-butoxypheny₁)-4-(4-morpholinyl)- (CA INDEX NAME)

847756-82-5 HCAPLUS
2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-thiomorpholinyl)- (CA NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN INDEX NAME)

847756-39-2 HCAPLUS 2-Pteridinamine, 6-(4-aminophenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

847756-40-5 HCAPLUS 2-Pteridinamine, 6-(3-aminophenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

847756-67-6 HCAPLUS
Phenol, 4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]- (CA INDEX NAME)

L8 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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L8 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN. (Continued)

LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, KK, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, LV, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, RN: BN, GH, GM, KE, LS, MN, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AW, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BR, BG, CH, CY, CZ, CB, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BP, BJ, CP, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1663244 A2 20050607 EP 2004-765120 20040913

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

US 2007004721 A1 20070104 US 2006-595161 20060310

PRIORITY APPLN. INFO:

GB 2004-8955 A 20040422

WO 2004-EP10198 W 20040913

OTHER SOURCE(S):

MARPAT 142:297927

IT 247913-58-2P 247913-59-3P 247913-60-6P 247913-61-7P 278800-09-2P 278800-18-3P RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of pteridine derivs. for treating TNF-alpha related disorders)

CN 2-Pteridinamine, 4-(4-morpholinyl)-6-phenyl- (9CI) (CA INDEX NAME)

RN 247913-58-3 HCAPLUS

CN 2-Pteridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)
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This invention relates to the use of a group of pteridine derivs. I (X = 0, or S(O)m wherein m is an integer from 0 to 2, or a substituted amine, R1 = alkyl, alkynyl, cycloalkyl, aryl heterocycle, halogen, alkoxy atc., R2 = amino, acylamino, thioacylamino, carbamoyl, thiocarbamoyl, ureido, thioredio, sulfon-amido, hydroxylamino, alkoxyamino, thioalkylamino, mercaptoamino, hydrazino, alkyhydrazino, aryl, heterocycle, etc., R3, R4 - H, halogen, alkyl, alkenyl, alkynyl, alkyl, carboxy, acetoxy, alkoxy, oxyheterocyclic, etc.) their pharmaceutically acceptable salts, N-oxides, solvates, dihydro- and tetrahydro derivs, and enantiomers, for the facture solvates, dihydro- and tetrahydro deriva. and enantiomers, for the manufacture

of a medicament for the prevention or treatment of TNF-a related disorders. Thus, 2-amino-4-isopropoxypteridine was cooled in trifluoroacetic acid and treated with 35% H2O2 to give 2-amino-4-isopropoxypteridine-N8-oxide which had a IC50 value of 4.0 µM against TNF-a. The conditions treated may be septic or endotoxic shock, toxic effects of radiotherapy, TNF-a or chemotherapeutic agents, or cachexia.

ACCESSION NUMBER: 2005:228920 HCAPLUS DOCUMENT NUMBER: TITLE: 142:297927 Pteridine derivatives for treating TNP-alpha related disorders
Herdewijn, Piet, Waer, Mark, De Jonghe, Steven Cesar
Alfons, Yuan, Lin, El Hassane, Sefrioui
4 AZA Bioscience NV, Belg.
Brit. UK Pat. Appl., 72 pp.
CODEN: BAXXDU INVENTOR (S): PATENT ASSIGNEE(S): SOURCE: DOCUMENT TYPE: Patent English FAMILY ACC. NUM. COUNT: PATENT INFORMATION: PATENT NO. KIND DATE APPLICATION NO. DATE GB 2003-21384 AU 2004-271721 CA 2004-2534549 WO 2004-EP10198 GB 2405793 AU 2004271721 CA 2534549 WO 2005025574 20050316 20050324 20050324 20050324 20050630 WO 2005025574 AE, AG, AL, AM, AT, AU, AZ, CN, CO, CR, CU, CZ, DE, DK, GE, GH, GM, HR, HU, ID, IL, BG, BR, BW, EC, BE, EG, JP, KE, KG, ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued) 247913-60-6 HCAPLUS 2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN Entered STN: 16 Mar 2005

RN 247913-61-7 HCAPLUS
CN 2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

OMe

RN 278800-05-9 HCAPLUS CN 2-Pteridinamine, 6-(4-chlorophenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

HAN N N N O

RN 278800-07-0 HCAPLUS CN 2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

Young, Shawquia, Page 10

278800-08-1 HCAPLUS
2-Pteridinamine, 6-(4-chlorophenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA

∠/segu-i=-) RCAPLUS 2-Pteridinamine, 4-(4-morpholinyl)-6-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX NAME)

ANSWER 4 OP 14 HCAPLUS COPYRIGHT 2007 ACS ON STN Entered STN: 11 Mar 2005

This invention relates to a group of trisubstituted and tetrasubstituted pteridine derivs. I $[X=0,'S(0)m,NZ,m=.0\cdot2,Z=H,OH,Rl\ or\ NZ=heterocyclic group, Rl= (un)substituted Cl-7 alkyl, C2-7 alkynyl, C3-10 cycloalkyl, C3-10 cycloalkenyl, aryl, alkylaryl,$

alkynyl, C3-10 cycloalkyl, C3-10 cycloalkenyl, aryl, alkylaryl, alkyl.
heterocyclyl, heterocycloalkyl, etc., R2 = amino, acylamino, chambanoyl, thiocarbamoyl, ureido, thiourcido, sulfonamido, hydroxylamino, alkoxyamino, thioakylamino, hydrazino, etc., R3 = F, Cl, Br, iodo, any group R1, R4 = H, halo, any group R1), their pharmaceutically acceptable salts, N-oxides, solvates, dihydro and etrinhydro derive, and enantioners, possessing unexpectedly desirable pharmaceutical properties, in particular which are highly active immunosuppressive agents, and as such are useful in the treatment in transplant rejection and/or in the treatment of certain inflammatory diseases. These compds, are also useful in preventing or treating cardiovascular disorders, allergic conditions, disorders of the central nervous system and cell proliferative disorders. Thus, (S)-sec-butylpatridine II (prepared in several steps from 2,6-diamino-5-hydroxypyrinidine, 3,4-dimethoryphenylglyoxal oxime, and (S)-sec-butylamine) showed an ICSO of 0.2 µmol/L in a mixed lymphocyte suppression assay and an ICSO value of 0.3 µm in a TNF-a

2005:216684 HCAPLUS

DOCUMENT NUMBER: 142:298130 Preparation and immunosuppressive effects of

pteridine

derivatives
Waer, Mark Jozef Albert, Herdewijn, Piet Andre INVENTOR (S):

Maria; Pfleiderer, Wolfgang Eugén; Marchand, Arnaud Didier Marie; De Jonghe, Steven Cesar Alfons 4 Aza Bloscience NV, Belg. PCT Int. Appl., 100 pp. CODEN: PIXXD2

PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: English

PAMILY ACC. NUM. COUNT: PATENT INFORMATION:

APPLICATION NO. PATENT NO. DATE

Young, Shawquia, Page 11

ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

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W0 2005021003
W1 AE, AG,
CN, CO,
GS, GH,
LK, LR,
NO, NZ,
TJ, TM,
RW: BM, GH,
AZ, BY,
EE, ES,
SI, SK,
US 2004077859
GB 2413324
AU 2004267885
                                                                                                       HCAPLUS COPYRIGHT 2007 ACS ON STN A2 20850310 NO 2004-BE124 A3 20850609 NO 2004-BE124 A1 AN, AT, AU, AZ, BA, BB, BG, BR, BW, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, GM, HR, HU, ID, II, IN, IS, JF, KE, KG, LS, LT, LU, LV, MA, MD, MG, MK, MN, MM, MM, MM, CM, FR, TR, TT, TZ, UA, UG, US, UZ, VC, VN, GM, KE, JS, MM, KE, NA, SD, SL, SZ, TZ, KG, KZ, MD, RU, TJ, TM, AT, BB, BG, CH, TT, FR, GB, GR, HU, IE, IT, LU, MC, NL, TR, BF, BJ, CP, CG, CI, CM, GA, GN, GQ, TG
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CR,
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GB 2004-8955
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EP 2004-761485
GB, GR, IT, LI, LU,
CZ, EE, HU, PL, SK,
US 2006-595126
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                         US 200407859 A1 20040422

RE 2413124 A 20051026

AU 2004267885 A1 20050310

CA 2534151 A1 20050310

FI 1558081 A2 20060524

R: AT, BE, CH, DE, DK, ES, FR,

IE, 8I, FI, RO, CY, TR, BG,

US 2006287314 A1 20061221
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20030829
   PRIORITY APPLN. INFO.:
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                                                                                                                                                                                                                                                                                                                                                           19981228
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                                                                                                                                                                                                                                     US 2001-869468
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WO 2004-BE124 W 2004083

OTHER SOURCE(S): CASREACT 142:298130, MARPAT 142:298130

IT 247913-58-2P 247913-59-3P 247913-60-6P
247913-61-7P 278800-06-9P 278800-01-0P
278800-08-1P 278800-09-2P 278800-18-3P
847756-41-6P 847756-45-0P 847756-46-3-8P
847756-41-6P 847756-45-0P 847756-46-3P
847756-50-7P 847756-51-8P 847756-52-9P
847756-50-3P 847756-51-8P 847756-55-2P
847756-50-8P 847756-61-0P
847756-59-6P 847756-61-61-0P
847756-59-6P 847756-66-5P 847756-61-0P
847756-59-6P 847756-66-5P 847756-61-0P
847756-59-8P 847756-66-5P 847756-61-0P
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847756-59-8P 847756-73-4P 847756-73-2P
847756-75-69-8P 847756-73-4P 847756-73-2P
847756-75-69-8P 847756-73-4P 847756-73-5P
RL: PAC (Pharmacological activity), SPN (Synthetic preparation), THU (Therapeutic use), BIOL (Biological study), PREP (Preparation), USES (Uses)
                                                                                                                                                                                                                                     WO 2004-BE124
                                                                                                                                                                                                                                                                                                                                                          20040827
                             (User) (proparation and immunosuppressive effects of pteridine derivs.) 247913-58-2 HCAPLUS 2-Pteridinamine, 4-(4-morpholinyl)-6-phenyl- (9CI) (CA INDEX NAME)
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ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

247913-59-3 HCAPLUS 2-Pteridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

247913-60-6 HCAPLUS 2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

247913-61-7 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI). (CA INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

278800-09-2 HCAPLUS
2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

278800-18-3 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-(3,4,5-trimethoxyphenyl)- (9CI) (CAINDEX NAME)

HCAPLUS Benzamide, N-{4-{2-amino-4-(4-morpholinyl)-6-pteridinyl}phenyl}- (CA INDEX NAME)

Young, Shawquia, Page 12

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN (Continued)

278800-06-9 HCAPLUS 2-Pteridinamine, 6-(4-chlorophenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

278800-07-0 RCAPLUS
2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME) (CA

278800-08-1 HCAPLUS 2-Pteridinamine, 6-(4-chlorophenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

847756-42-7 HCAPLUS

Acetamide, -[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-2-phenoxy-(CA INDEX NAME)

847756-43-8 HCAPLUS Propanamide, N-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]- (CA INDEX NAME)

847756-44-9 HCAPLUS
2-Furancarboxamide, N-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-(CA INDEX NAME)

847756-45-0 HCAPLUS
Cyclohexanecarboxamide, N-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl}- (CA INDEX NAME)

LB ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued

RN 847756-46-1 HCAPLUS
CN Benzamide, N-[4-[2-amino-4-(4-morpholiny1)-6-pteridiny1]pheny1]-4-chloro-(CA INDEX NAME)

RN 847756-47-2 HCAPLUS
CN Acetamide, N-{4-{2-amino-4-(4-morpholinyl)-6-pteridinyl}phenyl}-2-(phenylmethoxy)- (CA INDEX NAME)

RN 847756-48-3 HCAPLUS
CN 4-Pyridinecarboxamide, N-[4-[2-amino-4-(4-morpholiny1)-6-pteridiny1]pheny1]- (CA INDEX NAME)

LB ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 847756-52-9 HCAPLUS
CN Benzoic acid, 4-[[[4-{2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]carbonyl]-, methyl ester (CA INDEX NAME)

RN 847756-53-0 HCAPLUS
CN Benzamide, N-[3-[2-amino-4-(4-morpholiny1)-6-pteridiny1]phenyl]- (CA INDEX NAME)

RN 847756-54-1 HCAPLUS
CN Benzenesulfonamide, N-[3-{2-amino-4-(4-morpholiny1)-6-pteridiny1}pheny1](CA INDEX NAME)

L8 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 847756-49-4 HCAPLUS
CN 2-Naphthalenecarboxamide, N-[4-(2-amino-4-(4-morpholinyl)-6-pteridinyl)phenyl)- (CA INDEX NAME)

RN 847756-50-7 HCAPLUS
CN Methenseulfonamide, N-{4-{2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl}(CA INDEX NAME)

RN 847756-51-8 HCAPLUS
CN Butanoic acid,
4-[[4-[2-aminc-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]4-oxo-, ethyl ester (CA INDEX NAME)

L8 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 847756-55-2 HCAPLUS
CN Acctamide,
N-[3-{2-amino-4-(4-morpholinyl)-6-pteridinyl|phenyl}-2-phenoxy(CA INDEX NAME)

RN 847756-56-3 HCAPLUS
CN 4-Pyridinecarboxamide, N-(3-{2-amino-4-(4-morpholinyl)-6-pteridinyl}phenyl)- (CA INDEX NAME)

RN 847756-57-4 HCAPLUS CN Cyclohexamecarboxamide, N-[3-[2-amino-4-(4-morpholiny1)-6pteridiny1]phenyll- (CA INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

847756-58-5 HCAPLUS
Benzoic acid, 4-[{[3-[2-amino-4-(4-morpholiny1)-6-pteridiny1]phenyl]amino]carbonyl]-, methyl ester (CA INDEX NAME)

847756-59-6 HCAPLUS Butanoic acid, -[2-amino-4-(4-morpholiny1)-6-pteridiny1)phenyl]amino]-4-oxo-, ethyl ester (CA INDEX NAME)

847756-60-9 HCAPLUS
Propanoic acid, 3-[[3-[2-amino-4-(4-morpholiny1)-6-pteridiny1]phenyl]amino]-3-oxo-, ethyl ester (CA INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

847756-64-3 HCAPLUS
Carbamic acid, [(1R)-2-[[3-[2-amino-4-(4-morpholiny1)-6-pteridiny1]phenyl|amino]-2-0xo-1-(phenylmethyl)ethyl]-, 1,1-dimethylethyl
ester (9C1) (CA INDEX NAME)

Absolute stereochemistry.

847756-65-4 HCAPLUS
Carbamic acid, [(19)-2-[[3-(2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]-1-(1H-indol-3-ylmethyl)-2-oxoethyl]-,
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Young, Shawquia, Page 14

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

B47756-61-0 HCAPLUS Acetamide, N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-2-(phenylmethoxy)- (CA INDEX NAME)

847756-62-1 HCAPLUS Ethanesulfonamide, N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-(CA INDEX NAME)

847756-63-2 HCAPLUS
Carbamic acid, [(19)-2-[[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]-2-0x0-1-(phenylmethyl)ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

847756-66-5 HCAPLUS
Carbamic acid, [(1R)-2-[[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]-1-(1H-indol-3-ylmethyl)-2-oxoethyl]-,
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

847756-68-7 HCAPLUS
2-Pteridinamine, 6-(4-ethoxyphenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

847756-69-8 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-[4-(phenylmethoxy)phenyl]- (CA

847756-70-1 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-(4-(2-phenylethoxy)phenyl)- (CAINDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

847756-71-2 HCAPLUS
Butanenitrile, 4-{4-{2-amino-4-(4-morpholinyl)-6-pteridinyl}phenoxy}-INDEX NAME)

847756-72-3 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-(4-propoxyphenyl)- (CA INDEX NAME)

847756-73-4 HCAPLUS
Butanoic acid, 4-[4-[2-amino-4-(4-morpholiny1)-6-pteridiny1]phenoxy)-,
ethyl ester (CA INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

RN 847756-82-5 HCAPLUS
CN 2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-thiomorpholinyl)- (CA INDEX

847756-37-0P 847756-38-1P 847756-39-2P 847756-40-5P 847756-69-RL: RCT (Reactant), SPN (Synthetic preparation), PREP (Preparation), RACT (Reactant or reagent) (preparation and immunosuppressive effects of pteridine derive.) 847756-37-0 HCAPLUS Acetamide, N-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl)phenyl]- (CA INDEX NAME)

847756-38-1 HCAPLUS
Acctamide, N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]- (CA
INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

847756-74-5 HCAPLUS Acetic acid, [4-[2-amino-4-[4-morpholinyl]-6-pteridinyl]phenoxy]-, ethyl ester (9CI) (CA INDEX NAME)

847756-75-6 HCAPLUS 2-Pteridinamine, 6-[4-(2-methoxyethoxy)phenyl]-4-(4-morpholinyl)- (CA INDEX NAME)

847756-76-7 HCAPLUS
2-Pteridinamine, 6-(4-butoxyphenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN

847756-39-2 HCAPLUS
2-Pteridinamine, 6-(4-aminophenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

847756-40-5 HCAPLUS
2-Pteridinamine, 6-(3-aminophenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

847756-67-6 HCAPLUS Phenol, 4-{2-amino-4-(4-morpholinyl)-6-pteridinyl}- (CA INDEX NAME)

E8 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN
END Entered STN: 23 Apr 2004
AB This invention relates to a group of trisubstituted and tetrasubstituted pteridine derivs, their pharmaceutically acceptable salts, N-oxides, solvates, dihydro- and tetrahydroderivatives and enantiomers, possessing unexpectedly desirable pharmaceutical properties, in particular which are highly active immunosuppressive agents, and as such are useful in the treatment in transplant rejection and/or in the treatment of certain inflammatory diseases. These compds. are also useful in preventing or treating cardiovascular disorders, allergic conditions, disorders of the central nervous system and cell proliferative disorders. The pteridine deriva. (preparation given) inhibited the mixed lymphocyte reaction and reduced

T cell proliferation in the CD3 and CD28 assay.

ACCESSION NUMBER: 2004;331825 HCAPLUS
DOCUMENT NUMBER: 140:350561

TITLE: Immunosuppressive effects of pteridine derivatives and

Maria, Pfleiderer, Wolfgang Eugen
Belg.
U.S. Pat. Appl. Publ., 46 pp., Cont.-in-part of U.S.
Ser. No. 869,466, abandoned.
CODEN: USXXCO
Patent
English 8 INVENTOR(S):

PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

	ENT I				KIN						ICAT:					ATE	
	2004							0422									
WO	2000	0391	29		A1	1 20000706			WO 1999-EP10320						19991228		
	W:	AE,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BY,	CA,	CH,	CN,	CR,	CU,
		CZ;	DE.	DK.	DM.	EB,	ES,	FI,	GB,	GD,	GE,	GH,	GM,	HR,	HU,	ID,	IL,
		IN,	IS,	JP,	KE,	KG,	KP,	KR,	KZ,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	MA,
		MD,	MG,	MK,	MN,	MW,	MX.	NO.	NZ,	PL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,
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		DK,	ES,	ΡI,	FR,	GB,	GR,	IE,	IT,	LU,	MC,	NL,	PT,	SE,	BF,	ВJ,	CF,
		CG,	CI,	CM,	GA,	GN,	GW,	ML,	MR,	NE,	SN,	TD,	TG				
AU 2004267885					A1	A1 20050310			AU 2004-267885						2	0040	827
CA 2534151					A1	20050310			CA 2004-2534151								
	NO 2005021003				A2				WO 2004-BE124						2	0040	827
WO	2005021003						2005	0609									
	₩:	AE,	AG,	AL,	AM,	AT,	ΑU,	AZ,	BA,	BB,	BĢ,	BR,	BW,	BY,	BZ,	CA,	CH,
		ÇN,	co,	CR,	CU,	CZ,	DΕ,	DK,	DM,	DZ,	EC,	EB,	EG,	ES,	FI,	GB,	GD,
		GE,	GH,	GM,	HR,	ΗU,	ID,	IL,	IN,	18,	JP,	KΕ,	KG,	ΚP,	KR,	KZ,	LC,
		LK,	LR,	LS,	LT,	LU,	LV,	ΜA,	MD,	MG,	MK,	MN,	MW,	ΜX,	MZ,	NΑ,	NΙ,
		NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RŲ,	SC,	SD,	SE,	SG,	sк,	SL,	SY,
								UA,									
	RW:	BW,	GH,	GM,	ΚE,	LS,	MW,	ΜZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,
								TJ,									
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ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

47913-60-6 HCAPLUS -Pceridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAMB)

247913-61-7 HCAPLUS 2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI)

278800-06-9 HCAPLUS
2-Pteridinamine, 6-(4-chlorophenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX

Young, Shawquia, Page 16

ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN (Continued) 91, 8K, TR, BF, BJ, CF, CG, C1, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG 20040827 NL, SE, MC, PT. 20060118 PRIORITY APPLN. INFO.: US 1998-113989P 19981228 WO 1999-EP10320 W 19991228 US 2001-869468 B2 20011010 US 2003-651604 A 20030829 A 20040422 WO 2004-BE124 W 20040827

CTHER SOURCE(S): MARPAT 140:350561

IT 247913-58-2P 247913-59-3P 247913-60-6P
247913-61-7P 278800-06-9P 278800-07-0P
278800-08-1P 278800-18-3P
RL: BSU (Biological study, unclassified), PAC (Pharmacological activity),
SPN (Synthetic preparation); THU (Therapeutic use), BIOL (Biological study); PREP (Preparation); USES (Uses)
(immunosuppressant pteridine derivs. and compns.)

RN 247913-58-2 HCAPLUS
CN 2-Pteridinamine, 4-(4-morpholinyl)-6-phenyl- (9CI) (CA INDEX NAME)

247913-59-3 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

ANSMER 5 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (CONLINUED, 278800-07-0 HCAPLUS 2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA

278800-08-1 HCAPLUS 2-Pteridinamine, 6-(4-chlorophenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

278800-09-2 HCAPLUS 2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

278800-18-3 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-(3,4,5-trimethoxyphenyl)- (9CI) (CA

ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued) 247913-60-6 247913-61-7 RE: PAC (Pharmacological activity); RCT (Reactant); THU (Therapoutic BIOL (Biological study), RACT (Reactant or reagent), USES (Uses) (preparation and QSAR of 4-oxo- and 4-amino-pteridine-based neuronal NOS inhibitors) 913-60-6 HCAPLUS 247913-60-6 HCAPLUS 2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

247913-61-7 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX

RI: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(preparation and QSAR of 4-oxo- and 4-amino-pteridine-based neuronal NOS

inhibitors)
278800-09-2 HCAPLUS
2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA

ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN Entered STN: 26 May 2002 The family of homodimeric nitric oxide synthases (NOS I-III) catalyzes

generation of the cellular messenger nitric oxide (NO) by oxidation of

substrate L-arginine. The rational design of specific NOS inhibitors is of therapeutic interest in regulating pathol. NO levels associated with sepsis, inflammatory, and neurodegenerative diseases. The cofactor (6R)-5, 6, 7, 8-tetrahydrobiopterin (HABip) maximally activates all NOSs and stabilizes enzyme quaternary structure by promoting and stabilizing dimerization. Here, we describe the synthesis and three-dimensional (3D) quant. structure-activity relationship (QSAR) anal. of 65 novel 4-amino-and 4-oxo-pteridimes (antipterins) as inhibitors targeting the HABip binding site of the neuronal NOS isoform (NOS-17). The exptl binding modes for two inhibitors complexed with the related endothelial NO synthase (NOS-171) reveal requirements of biol. affinity and form the basis for ligand alignment. Different alignment rules were derived by building other compds. accordingly using manual superposition of a tic

pullding other compds. accordingly using manual superposition or a genetic algorithm for flexible superposition. Those alignments led to 3D-QSAR models (comparative mol. field anal. (coMPA) and comparative mol. similarity index anal. (coMSAN), which were validated using leave-one-out cross-validation, multiple analyses with two and five randomly chosen cross-validation groups, perturbation of biol. activities by randomization or progressive scrambling, and external prediction. An iterative realignment procedure based on rigid field fit was used to improve the consistency of the resulting partial least squares models. This led to consistent and highly predictive 3D-QSAR models with good correlation coeffs. for both CoMFA and CoMSIA, which correspond to exptl. determined NOS-II

NOS-II And -III H4Bip binding site topologies as well as to the NOS-I homol model binding site in terms of steric, electrostatic, and hydrophobic complementarity. These models provide clear guidelines and accurate activity predictions for novel NOS-I inhibitors.

ACCESSION NUMBER: 2002/392358 HCAPLUS
DOCUMENT NUMBER: 137:119060
TITLE: Structural Requirements for Inhibition of the Neuronal

Nitric Oxide Synthase (NOS-I): 3D-QSAR Analysis of 4-Oxo- and 4-Amino-Pteridine-Based Inhibitors Matter, Hans; Kotsonis, Peter; Klingler, Otmar; Strobel, Hartmut, Proehlich, Lothar G., Prey, Armin, Pfleiderer, Wolfgang, Schmidt, Harald H. H. W. Molecular Modeling, Aventis Pharma; Frankfurt am AUTHOR (S):

CORPORATE SOURCE:

65926, Germany Journal of Medicinal Chemistry (2002), 45(14), Journal of Medicinal Chemistry 2923-2941 CODEN: JMCMAR, ISSN: 0022-2623 American Chemical Society Journal SOURCE:

PUBLISHER:

DOCUMENT TYPE: LANGUAGE:

English CASREACT 137:119060 OTHER SOURCE(S):

ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

247913-58-2 247913-59-3
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (preparation and QSAR of 4-oxo- and 4-amino-pteridine-based neuronal

inhibitors)
247913-58-2 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-phenyl- (9CI) (CA INDEX NAME)

247913-59-3 HCAPLUS
2-Ptoridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

278800-08-1 RL: RCT (Reactant) / RACT (Reactant or reagent) (preparation and QSAR of 4-oxo- and 4-amino-pteridine-based neuronal IT

inhibitors)
278800-08-1 HCAPLUS
2-Pteridinamine, 6-(4-chlorophenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

REFERENCE COUNT:

111 THERE ARE 111 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

L8 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN (Continued)

EP 1216246 A1 20020526 EP 2000-964154 20000911

EP 1216246 B1 20050824

R: AT, BE, CH, DE, DK, ES, FR, OB, GR, IT, LI, LU, NL, SE, MC, PT,

IE, SI, LT, LV, FI, RO, MK, CY, AL

JP 2004522690 T 200405915 AT 2000-964154 20000911

AT 302778 T 20040729 JP 2001-524995 20000911

ES 2248124 T3 20050315 AT 2000-964154 20000911

US 6844343 B1 20050118 US 2002-70376 20020719

PRIORITY APPLN. INFO:: DE 1999-19944767 A 19990917 WO 2000-RP8833 W 20000911

OTHER SOURCE(S): MARPAT 134:237499

IT 247913-58-2P 247913-60-6P 247913-61-7P
278800-07-0P 278800-08-1P 330575-33-2P
RL: BAC (Biological activity or effector, except adverse), BSU

(Biological study, unclassified), RCT (Reactant), SPN (Synthetic preparation), THU
(Therapeutic use), BIOL (Biological study), PREP (Preparation), RACT
(Reactant or reagent), USES (Uses)
(inhibitors
for pharmaceutical use)

RN 247913-58-2 HCAPLUS
CN 2-Pteridinamine, 4-(4-morpholinyl)-6-phenyl- (9CI) (CA INDEX NAME)

HCAPLUS

247913-60-6 HCAPLUS
2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

247913-61-7 HCAPLUS 2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX

ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN Entered STN: 30 Mar 2001

Pteridines, such as I [R1, R2 = H, alkyl, aryl, arylalkyl, R1R2 = nitrogen

ogen
bound heterocyclyl, such as 1-piperidinyl or 4-morpholinyl, R4 = alkyl,
alkenyl, alkynyl, cycloalkenyl, aryl, etc., R3, R5 = acyl, aroyl, R6 = R7
= H, or R3R6 = R5R7 = bond;], were prepared for pharmaceutical use.

Thus,
pteridine II was prepared via cyclocondensation of N4,N4dimethylpyrimidinetetramine dihydrochloride and phenylglyoxal monoxime.
The prepared pteridines were tested for nitric oxide synthase inhibiting activity.

ACCESSION NUMBER: 2001:228889 HCAPLUS

DOCUMENT NUMBER :

134:237499

TITLE: INVENTOR (S):

PATENT ASSIGNEE(S):

134;237499
Preparation of N-substituted-4-aminopteridines as NO synthase inhibitors for use as pharmaceuticals Pfleiderer. Wolfgang, Schmidt, Harald, Froehlich, Lothar, Kotsonis, Peter, Taghavi-Moghadam, Shahriyar Vasopharm Biotech G.m.b.H. & Co. K.-G., Germany PCT Int. Appl., 43 pp. CODEN: PIXXD2
Patent
German

DOCUMENT TYPE: LANGUAGE:

FAMILY ACC. NUM. COUNT:

PATENT NO. . DATE KIND DATE APPLICATION NO. MO 2001021619 A1 20010329 MO 2000-EP8833 20000931
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, RR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, NN, MM, MX, MZ, NO, NZ, PL, PT, RO, RU, YU, ZA, ZW
RHI GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CP, CG, CI, CM, GA, GN, GM, ML, MR, NE, SN, TD, TD
DE 19944767 A1 20010329 DE 1999-19944767 19990917

ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

278800-07-0 HCAPLUS 2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

278800-08-1 HCAPLUS
2-Pteridinamine, 6-(4-chlorophenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

RN 330575-33-2 HCAPLUS CN 2-Pteridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)-, monohydrochloride (SCI) (CA INDEX NAME)

• HCl

IT 330575-32-1P 330575-34-3P
RL: BAC (Biological activity or effector, except adverse), BSU
(Biological
study, unclassified), SPN (Synthetic preparation), THU (Therapeutic use),
BIOL (Biological study), PREP (Preparation), USES (Uses)
(preparation of N-substituted-4-aminopteridines as NO synthase
inhibitors
for pharmaceutical use)
RN 330575-32-1 MCAPLUS
C 2-Pteridinamine, 6-(4-chlorophenyl)-4-(4-morpholinyl)-, monohydrochloride
(9CI) (CA INDEX NAME)

330575-34-3 HCAPLUS
2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(1-piperidinyl)-, monohydrochloride (9C1) (CA INDEX NAME)

ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN Entered STN: 07 Jul 2000

Pteridines, such as I [R1, R2 = NH2, NH0H, alkylamine, dislkylamine, alkyloxyamine, dialkyloxyamine, nitrogen containing heterocyclyl, etc./

halogen, alkoxy, alkyl, aryl, etc., R4 = H, alkyl, alkoxy, aryl] were prepared for pharmaceutical use in the treatment of inflammatory diseases and autoimmune disorders. Thus, pteridine II was prepared in 72% yield

reaction of 6-chloro-4-(pentyloxy)-2-pteridinamine and styrene using palladium acetate, tri-o-tolylphosphine, cuprous iodide, and

triethylamania
in acetonicrile. The preparation of acetonicrile in munosuppressive
and anti-inflammatory activity.
ACCESSION NUMBER: 2000:457070 HCAPLUS
DOCUMENT NUMBER: 133:73895
TITLE: Preparation of pteridine derivatives for pharmaceutical use in the treatment of inflammatory diseases and autoimmune disorders
INVENTOR(S): Waer, Mark Joseph Albert, Herdewijn, Piet Andre Maurits Maria; Pfleiderer, Wolfgang Sugen
PATENT ASSIGNER(S): K.U. Leuven Research & Development, Belg.
PCT Int. Appl., 56 pp.
CODE: PIXXD2
Patent triethylamine
in acetonitrile. The prepared pteridines were tested for

LANGUAGE: FAMILY ACC. NUM. CO PATENT INFORMATION:

PAT	ENT	NO.			KIN	0	DATE									ATE			
						-			•						-				
WO	2000	0391	29		A1 2			20000706		WO 1999-EP10320						19991228			
	W:	AE,	AL,	AM,	AT,	ΑU,	AZ,	BA,	BB,	BG,	BR,	BY,	CA,	CH,	CN,	CR,	CU,		
		CZ,	DE,	DK,	DM,	EE,	ES,	FI,	GB,	GD,	GB,	GH,	GM,	HR,	HU,	ID,	IL,		
		IN,	IS,	JP,	KE,	KG,	KP,	KR,	ΚZ,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	MA,		
		MD,	MG,	MK,	MN,	MW,	MX,	NO,	NZ,	PL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,		
		SK,	SL,	TJ,	TM,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VN,	YU,	ZA,	Z₩			
	RW:	GH,	GM,	KE,	LS,	MW,	SD,	ЯL,	SZ,	TZ,	UG,	ZW,	AT,	BE,	CH,	CY,	DE,		
		DK,	ES,	FI,	FR,	GB,	GR,	IE,	IT,	LU,	MC,	NL,	PT,	SE,	BF,	ΒJ,	CF,		
		CG,	CI,	CM,	GA,	GN,	GW,	ML,	MR,	NE,	SN,	TD,	TG						
CA	2356	380			A1		2000	0706		CA 1	999-	2356	380		1	9991	228		
EP	1144	412			A1		2001	1017		EP 1	999-	9646	63		1	9991	228		
БP	1144	412			B1		2004	0929											
•	ъ.	AT.	22	CH	DE	DK	E9	FR.	GR.	GR.	IT.	LT.	LU.	NL.	SE.	MC.	PT.		

Young, Shawquia, Page 19

ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

REFERENCE COUNT:

THERE ARE 8 CITED REPERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

178	ANSWER 8 OF 14 H			2007 A	cs on	STN	(Contin	nued)		
	JP 2002533464	T T	20021008		2000	591040		19991228		
		B2	20021008			-30429		19991228		
	AU 770551	T B2	20040226			964663		19991228		
	AT 277929					-964663		19991228		
	ES 2229803	T3	20050416			-651604		20030829		
	US 2004077859	A1	20040422			-275601		20050829		
	US 2006189620	A1	20060824					20060227		
	US 2006287314	A1	20061221			-595126 -113989P		19981228		
PRIO	RITY APPLN. INFO.:			US	1998	-113989P	P	19981228		
				WO	1999	-BP10320	W	19991228		
	•			ŲS	2001	-869468	B2	20011010		
				. US	2003	-651604	Al	20030829		
				GB	2004	-8955	A	20040422		
				WO	2004	-BB124	W	20040827		
OTHE IT	OTHER SOURCE(S): MARPAT 133:73895 IT 247913-58-2P 247913-59-3P 247913-60-6P 247913-61-7P 278800-06-9P 278800-07-0P									
	278800-08-1P 2788 RL: BAC (Biologic				exce	pt adver	se); BSI	נו		
(Bio	logical									
	study, unclassifi	ed); SPN	(Synthet:	ic prep	arati	on); THU	(Thera	peutic use);		
	BIOL (Biological	study);	PREP (Prej	paratio	n); U	SBS (Use:	3)			
	(preparation o	f pterid	ine deriv	s. for	pharm	aceutica:	l use i	n the		
trea	tment of	-								
	inflammatory d	liseases	and autoir	mmune d	isord	ers)				
RN	247913-58-2 HCAI									
CN	2-Pteridinamine,	4 - (4 - mor	pholinyl)	-6-phen	yl- (9CI) (C	A INDEX	NAME)		
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247913-59-3 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

247913-60-6 HCAPLUS ,
2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAMB)

247913-61-7 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

278800-06-9 HCAPLUS 2-Pteridinamine, 6-(4-chlorophenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAMB)

ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

278800-18-3 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-(3,4,5-trimethoxyphenyl)- (9CI) (CAINDEX NAME)

THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

HCAPLUS

2-Pteridinamine, 6-(4-chlorophenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX

HCAPLUS

2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

Answer 9 of 14 HCAPLUS COPYRIGHT 2007 ACS on STN

Entered STN: 21 Sep 1999

The family of nitric oxide synthases (NOS) catalyzes the conversion of L-arginine to L-citrulline and nitric oxide (NO), an important cellular messenger mol. which has been implicated in the pathophysiol. of septic shock and inflammatory and neurodegenerative disease states. NOS can be maximally activated by the ubiquitous cofactor, (6R)-5,6,7,8-tetrahydroblopterin (H4Bip), and antagonists of H4Bip may be of therapeutic importance to inhibit pathol. high NO formation. The 4-amino substituted analog of H4Bip was reported to be a potent NOS inhibitor. Therefore, we developed a series of novel 4-amino pteridine derivs., anti-pterins, to pharmacol. target the neuronal isoform of nitric oxide synthase (NOS-1). To functionally characterize the pterin/anti-pterin interaction and establish a structure-activity relationship (SAR), we systematically altered the substituents in the 2-, 4-, 5-, 6-, and 7-position of the pteridine nucleus. Varying the substitution pattern in the 2-, 5-, and 7-position resulted in no significant inhibitory effect

enzyme activity. In contrast, bulky substituents in the 6-position, such as Ph, markedly increased the inhibitory potency of the reduced 4-amino-5,6,7,8-tetrahydropteridines, possibly as a consequence of hydrophobic interactions within NoS-I. However, this was not the case for the aromatic 4-amino pteridines. Interestingly, chemical modification of

4-amino substituent by dialkyl/diaralkylation together with 6-arylation

*-maino Budsituent by dialky//diaralkylation together with 6-arylation of the aromatic 2,4-diamino pteridine resulted in potent and efficacious inhibitors of NoS-I, suggesting possible hydrophilic and hydrophobic interactions within NoS-I. This SAR agrees with (a) the recently published crystal structure of the oxygenase domain of the inducible NoS isoform (NOS-II) and (b) the comparative mol. field anal. of selected NOS-I inhibitors, which resulted in a JD-OSAR model of the pterin binding site interactions. Further optimization should be possible when the full length structure of NOS-I becomes available.

ACCESSION NUMBER: 1999:580997 HCAPUUS

TITLE: 131:317316

Inhibition of Neuronal Nitric Oxide Synthase by 4-Amino Pteridine Derivatives: Structure-Activity Relationship of Antagonists of (6R)-5,67,8-Tetrahydroblopterin Cofactor

AUTHOR(S): Prochlich, Lothar G., Kotsonis, Peter, Traub,

AUTHOR(S): Hermann;

AUTHOR(S): Proehlich, Lother G., Kotsonis, Peter, Traub,
Hermann;

Taghavi-Moghadam, Shahriyar, Al-Masoudi, Najim,
Hofmann, Heinrich, Strobel, Hartmut, Matter, Hans,
Pfleiderer, Wolfgang, Schmidt, Harald H. H. W.
Department of Pharmacology and Toxicology,
Julius-Maximilians University Wuerzburg, Wuerzburg,
97078, Germany

Journal of Medicinal Chemistry (1999), 42(20),
4108-4121
CODEN: JMCMAR, ISSN: 0022-2623

PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
IT 247913-58-2P 247913-59-3P 247913-60-6P
247913-61-7P
RL: BAC (Biological activity or effector, except adverse), BSU
(Biological study, unclassified), PRP (Properties), SPN (Synthetic preparation), THU
(Therapeutic use), BIOL (Biological study), PREP (Preparation), USES

ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Uses) (synthesis of and inhibition of neuronal nitric oxide synthase by

2-Pteridinamine, 4-(4-morpholinyl)-6-phenyl- (9CI) (CA INDEX NAME

247913-59-3 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

247913-60-6 HCAPLUS
2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

247913-61-7 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN Entered STN: 12 May 1984

AB Diarylpteridines (I, R = H, OMe, OEt, R1 = MeS, NH2, R2 = OH) were obtained in 70-82.5% yields by condensation of the corresponding diaminopyrimidine with p-RcsheCocCo6H4-p 3 hr in boiling AcOH-BtOH. Chlorination of I (R = H, R1 = NH2, R2 = OH) with Pcl5 gave 71% I (R2 = C1). Substitution reactions of the latter gave 45.6-70.5% I (R2 = Eto, MeSN, Et2N, piperidino, NHNH2).

ACCESSION NUMBER: 1976:560035 HCAPLUS
DOCUMENT NUMBER: 55:160035
TITLE: 55:160035
Pieridine derivatives. I. Synthesis of some substituted 6,7-diarylpteridines

AUTHOR(S): Kaldrikyan, M. A.; Danagulyan, G. G.; Khekoyan, A.

AUTHOR (S):

CORPORATE SOURCE: SOURCE:

DOCUMENT TYPE:

Arsenyan, F. G., Aroyan, A. A.
Inst. Tonkoi Org. Khim. im. Mndzhoyana, Yerevan, USSR
Armyanskii Khimicheskii Zhurnal (1976), 29(4), 337-41
CODEN: AYKZAN, ISSN: 0515-9628

Journal

LANGUAGE: STATE RUBSIAN
IT 60783-57-5P
RL: SPN (Synthetic preparation), PREP (Preparation)

(preparation of)
60783-57-5 HCAPLUS
2-Pteridinamine, 6,7-diphenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN

REFERENCE COUNT:

THERE ARE 60 CITED REFERENCES AVAILABLE FOR

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

EB ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

ED Entered STN: 12 May 1984

AB A number of 4,7-diamino-6-phenyl-, 2,7-diamino-6-phenyl- and
2,4,7-triamino-6-arylpteridines were prepared for diuretic testing by
condensation of arylacetonitriles and 4-amino-5-nitrosopyrimidines.
2,4-Dlamino-6-(methylthio)-5-nitrosopyrimidine and 4,6-diamino-2(methylthio)-5-nitrosopyrimidine were treated with amines to give
replacement of the MeS group by an amino group. Uv and N.M.R. spectra
suggest that the 2-cyanomethyl- and 2-carboxamidomethyl-4,7-diamino-6phenylpteridines exist as tautomers in which the cyano and carboxamido
groups are conjugated with the pteridine ring. Certain other conclusions
were drawn from the spectral data. 20 references.

ACCESSION NUMBER:
1968:467335 HCAPLUS
DOCUMENT NUMBER:
1968:467335 HCAPLUS
DOCUMENT NUMBER:
1968:467335 HCAPLUS
OCCUMENT NUMBER:
1978:167335
PTETICLE:
PETICIDINES
VI. Preparation of some
6-aryl-7-aminopteridines
AUTHOR(S):
Blaine;

The Property Number of Street Control of Street Contr AUTHOR(S): Blaine; Trost, Barry, Kirkpatrick, Joel, Parina, Frank; Straub, Alice S. Res. and Develop. Div., Smith Kline and Prench Lab., Philadelphia, PA, USA Journal of Medicinal Chemistry (1968), 11(J), 549-56 CODEN: JMCMAR, ISSN: 0022-2623 Journal English CORPORATE SOURCE: SOURCE:

ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN Entered STN: 12 May 1984
The diuretic activity of pteridines related to 2,4,7-triamino-6-phenylpteridine (triamterene), 2,4-diamino-6,7-dimethylpteridine (I), and 4,7-diamino-2-phenyl-pteridine-6-carboxamide was studied in the saline-loaded and sodium-deficient rat. A limited number of related pyrimidopyrimidines were similarly studied. Some of the compds. related to triamterene and I not only cause Na+ excretion but also conserve K+. All the 2-phenylpteridines that were studied which are active natriuretic agents also cause K+ excretion. In the triamterene series, replacement

any of the amino groups by either a large amine or a nonbasic group other than H leads to reduction of diuretic activity. Replacement of the Ph $\,$

small, nonbasic group gives active diuretic agents, but an aromatic (or heteroaromatic) group seems desirable for highest activity. Some variation in the substitution pattern on the pteridine ring is

permissible
as demonstrated by the activity of the triamterene isomers. The 7-Ph
isomer is outstanding as a blocker of K+ excretion.
ACCESSION NUMBER: 1968:452104 HCAPLUS
DOCUMENT NUMBER: 69:52104

DOCUMENT NUMBER: TITLE: Pteridines. XII. Structure-activity relation of

AUTHOR (S):

pteridine diuretics
Weinstock, Joseph, Wilson, James W., Wiebelhaus,
Virgil D., Maass, Alfred R., Brennan, Francis T.,
Sosnowski, Genevieve
Res. and Develop. Div., Smith Kline and French Lab.,
Philadelphia, PA, USA
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L8 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN
INVENTOR(S): Pachter, Irwin J., Weinstock, Joseph
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PATENT INFORMATION: (Continued)

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3159628		19641201	US 1962-197909	19620528
DETABLITY ABDIN INFO .			IIG PII	19620528

1048-67-5P, Pteridine, 2,7-diamino-6-phenyl-4-piperidino-, 5-oxide RL: PREP (Preparation) (preparation of) 1048-67-5 HCAPLUS Pteridine, 2,7-diamino-6-phenyl-4-piperidino-, 5-oxide (7CI, 8CI) (CA INDEX NAME)

ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN Entered STN: 22 Apr 2001 A process which circumvents the standard methods of preparing N-oxide derivs., which would lead to degradation of the pteridine nucleus of

compds., is described. The process is carried out by treating a pyridinium reagent [prepared in situ from an a-halo or benzenesulfonyl ketone and C5HSN or from an aldehyde, NaCN, Ph302Cl (I), and C5HSN) with an appropriately substituted 6-amino-5-nitroscopyrimidine in the presence of a basic condensing agent. Condensing agents which contain CN- can be used only in reactions using the latter type of pyridinium reagent in preparing 7-aminopteridine 5-oxides. Thus, a mixture of 7.4 g. a-cyanobenzyl benzenesulfonate (II) (prepared from BZH, NaCN, and I), 8 ml. C5HSN, and 15 ml. Me2CO is refluxed 15 min., added to a solution

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g. 4,6-diamino-5-nitroso-2-phenylpyrimidine (III) in 250 ml. Me2CO followed by a solution of 2 g. NaCN in 20 ml. H2O, warmed 5 min. at 40° and kept 1 hr. at room temperature to give 4,7-diamino-2,6-diphenylperidine 5-coxide, m. 355°. A mixture of 21.5 g. III. 20 g. KoAc, 25.6 g. acetonylpyridinium chloride (IV), 100 ml. H2O, and 1 l.

KOAC, 25.6 g. acetonylpyridinium chloride (IV), 100 ml. H2O, and 1 l. BIOH

BIOH

is refluxed 1 hr. to give 4-amino-7-methyl-2-phenylpteridine 5-oxide, m. 287° (decomposition). Similarly prepared (pyridinium reagent, substituents on 5-nitrosopyrimidine, condensing agent, and product given) are: II and C5H5N, 4,6-diamino-2-methylthio, NaCN, 4,7-diamino-2-methylthio-6-phenylpteridine 5-oxide, m. 351° (decomposition); IV, 4,6-diamino, NACC, 4-amino-7-methylpteridine 5-oxide, m. 256-1° (decomposition); phenacylpyridinium bromide, 4,6-diamino-2-phenyl, KOAC, 4-amino-2,7-diphenylpteridine 5-oxide, m. 258-60°, propiophenone-α-pyridinium bromide, 2,6-diamino-4-methyl, NAOAC, 2-amino-4,6-diamino-5-phenylpteridine 5-oxide, II and Utidine, 2-(α-thienyl)-4,6-diamino, NaCCO, 2-methyl-4-hydroxy-6-phenyl-7-aminopteridine 5-oxide; II and C5H5N, 2-methyl-4-hydroxy-6-amino, NACN, 2-methyl-4-methylthio-6-phenylpteridine 5-oxide; II and C5H5N, 2-methyl-4-hydroxy-6-meno, NACN, 2,7-diamino-4-methylthio-6-phenylpteridine 5-oxide; II and C5H5N, 2-methyl-4-hydroxy-6-meno, NACN, 2-methyl-4-methylthio-6-phenylpteridine 5-oxide; II and C5H5N, 2-methyl-4-hydroxy-6-meno, NACN, 2-methyl-4-methylthio-6-phenylpteridine 5-oxide; II and C5H5N, 2-methyl-4-hydroxy-6-meno, NACN, 2-methyl-4-methylthio-6-phenylpteridine 5-oxide; II and C5H5N, 2-methyl-4-hydroxy-6-menophylpteridine 5-oxide; II and C5H5N, 2-methyl-4-hydroxy-6-menophylpteridine; 2-oxide; II and C5H5N, 2-methyl-4-hydroxy-6-menophylpteridine; 2-oxide; II and C5H5N, 2-methylpteridine; 2-oxide; II and C5H5N, 2-methylpteri

g. II, 16.6 ml. C5H5N, and 30 ml. heated Me2CO, and finally with 4.1 g. NaCN in 40 ml. H2O to give the diacetylaminopteridine derivative, which is

hydrolyzed with MeONa in MeOH to give 2,4,7-triamino-6-phenylpteridine 5-oxide, m. 340° (decomposition). V refluxed in piperidine for 16 hrs. gives 2,7-diamino-4-piperidino-6-phenylpteridine 5-oxide, m. 250-2° (decomposition) (EtOH). These compds. have antifolic acid activity

(decomposition) (ECOH). These compos, have antituit acts activity various microorganisms. Certain members of the series also have diuretic or antihypertensive activity.

ACCESSION NUMBER: 1965:36875. HCAPLUS
DOCUMENT NUMBER: 62:36875
DOCUMENT NUMBER: 62:36875
TITLE: Pteridine 5-oxides

ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN
Entered STN: 22 Apr 2001
4-Amino-5-nitrospoyrimidines condense with benzoylacetonitrile,
phenacylpyridinium bromide, and acetonylpyridinium chloride in the
presence of sodium cyanide to produce 7-amino-6-peridyl ketones (I).
Reduction of the products with sodium borohydride yields the

Reduction of the products with the services are produced when carbinols. 7-Substituted pteridine 5-oxides are produced when 4-amino-5-nitrosopyrimidines condense with the aforementioned pyridinium salts in the presence of potassium acctate. The use of a-cyanobenzylpyridinium salts in related reactions results in the formation of 7-amino-6-phenylpteridine 5-oxides.

ACCESSION NUMBER: 56:73306 HCAPLUS

DOCUMENT NUMBER: 58:73306

Pteridines. III. Synthesis of some ketones, carbinols,

and N-oxides AUTHOR (S):

CORPORATE SOURCE:

and N-oxides Pachter, Irwin J., Nemeth, Piroska E., Villani, Anthony J. Smith, Kline & Prench Labs., Philadelphia, PA Journal of Organic Chemistry (1963), 28, 1197-202 CODEN: JOCEAH, ISSN: 0022-2261 SOURCE:

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LANGUAGE: OTHER SOURCE(S): IT 1048-67-5P.

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